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THE HINDU

Bio-char, compost tea are the new recipe

The use of bio-char in the growing medium and the aerated activated compost tea as nutritional supplement has been a huge success.

Sakthikulangara, the seaside locale of Kollam Municipal Corporation, Kerala, is famous for fishing and fishery-related activities; as an agricultural sector, it does not evoke any enthusiasm, or never held out any promise. What with the prevailing soil and climatic conditions, which favours leaching and draining of soil nutrients into the Arabian sea and Ashtamudi Lake, the soil has high acidity making it unfit for cultivation of any kind. Moreover, the present-day nuclear-family concept with limited land-holdings of 5-8 cents, limiting space for any sort of cultivation, has made Sakthikulangara not a haven for green revolution.

All these could become a thing of the past. The initiative by Antony John, a resident of Ramankulangara in Sakthikulangara, could transform this crop-debilitated area into a hub of the new green revolution — to produce fresh, hygienic, and organic vegetables in each family being its thrust. Mr. John, a progressive farmer-scientist, much lauded and awarded by organisations such as ATMA, has been cultivating a variety of vegetables — amaranths,

lettuce, kale, tomato, brinjal, capsicum, cabbage, cauliflower et al within the limited terrace area available to him, with vertical farming.

Though vertical farming is not an entirely novel concept, what makes Mr. John's initiative different is the distinctly different inputs he uses both in the growing medium and in the nutrient supplement. He uses treated coirpith and bio-char in equal proportions to make up 95 per cent of the growing medium, the rest five per cent being the soil available in the area. Vegetable seedlings are planted in the PVC channels of the vertical unit after filling it with the growing medium; irrigation is regulated by drip method using automatic timer.

Periodically, the pH factor is monitored and corrected if necessary, to maintain at required level. He also uses compost produced at his own house by converting kitchen and other domestic bio-waste, for which he has developed a simple, but efficient aerobic bio-composing unit: the unit composts all domestic bio-waste in an eco-friendly manner to produce compost within 45 days. The ooze, which starts to come out from the unit from the third day onwards is effectively utilised both for disease prevention, and disease cure.

The ooze is enriched before application with bio-fertilisers and friendly microbes, such as azetobacter and azospirilum and others and then aerated for 48 hours to make the aerated activated compost tea.

Mr. John cleverly utilised the bio-resource available, by adopted Maynard Murray's experiments with sea water in his farming. He diluted one litre of sea water with 10 litres of fresh water and applied it in the soil and on the foliage, to utilise the 92 micro-nutrients available in sea water by spraying this sea water-fresh water mixture once in a month, he claimed that he could produce nutrient rich organic vegetables.

He claims that the use of bio-char in the growing medium and the aerated activated compost tea as nutritional supplement has been a huge success.

Bio-char reduces the acidity of the soil, protects the plants from diseases, promotes growth of friendly micro organisms, and reduces the loss of micro nutrients apart from increasing water retain-ability.

“His commonsense approach utilising the indigenous and advanced technologies available certainly is an eye opener, and his initiative can very well be the role model for all agriculture loving people, not only in Sakthikulangara but also in Kerala as a whole,” claims Sherin A Salam, Agricultural Officer, Krishi Bhavan, Sakthikulangara.

For more details: watch Youtube video presentation “New Organic Green Revolution by Antony John,” or contact him at 9447410584.
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Climate smart cultivation reaps profit in Nepal

Nepalese farmers are now using a home-brewed alternative for cultivation that is safer for the environment...

Farmers in Sheetal Basti and in nearby villages say they have started producing and using ‘jholmol’ that costs them nothing. Picture for representational purpose only.

Middle-aged vegetable grower Ganga Badal, who lives with her four-member family in Sheetal Basti village in Nepal’s Kavrepalanchok district, is one of many to benefit from an alternative method of cultivation that saves the soil from deterioration and boosts her bottom line.

Earlier she struggled to market the vegetables, a fact she attributes to overuse of chemical pesticides to control diseases and pests. Even the soil fertility was deteriorating.

“The agricultural produce from this area was earlier banned in Kathmandu’s prominent vegetable market owing to the optimum use of pesticides,” Badal said.

Now Badal, who is president of the local farmers group, is using a home-brewed alternative for cultivation that is not only safer for the environment but also boosts her family income by reducing the dependence on chemicals, the bulk of it purchased.

For decades, farmers of this Himalayan nation have been using the dung of their cows and buffaloes as manure. But they had to use pesticides to control crop infestations.

Swifting to 'jholmol'

As a pilot project, scientists and agricultural experts have been promoting the use of the bio-pesticide-cum-organic fertilizer named ‘jholmol’ in Kavrepalanchok district.

The farmers, who earlier relied on pesticides to control diseases and fertilizer for the growth of plants, are now using ‘jholmol’ for cereal and vegetable crops.

“Jholmol helps controlling diseases and pest attacks too. It also mitigates the negative effects of chemicals on soil fertility and improved plant’s health. The big advantage is that it saved a lot of money spent earlier on agricultural inputs,” said a beaming Badal, who owns small terraced fields planted with cucumbers, potatoes and cauliflowers.

She has been able to increase her crop yield by at least 25 percent. Her group is sharing their success with nearby village groups.

Farmers in Sheetal Basti and in nearby villages say they have started producing and using ‘jholmol’ that costs them nothing.

It’s easy for farmers to brew ‘jholmol’, a liquid cocktail of livestock dung, urine and agricultural waste with a combination of additives from locally grown medicinal plants like neem and stinging nettles.

Surveys by the ICIMOD (International Centre for Integrated Mountain Development) say pesticides and fertilizers account for approximately 50 percent of the farmers’ total production costs.

Roshan Subedi, the local agricultural coordinator with NGO Centre for Environmental and Agricultural Policy Research, Extension and Development (CEAPRED), said that the use of organic pesticide ‘jholmol’ is getting popular in the villages.

ICIMOD with its partner CEAPRED has adopted five Climate Smart Village pilots in Kavrepalanchok district under the Himalayan Climate Change Adaption Programme (HICAP).

The farmers in most of the villages are facing difficulties owing to scarce rains and rising temperature and the extent to which climate change is affecting their livelihoods. The programme aims to adopt new farming practices like rainwater harvesting, cropping patterns and nutrient and soil management techniques.

Subedi said the farmers have been trained to experiment with organic practices to improve the productivity.

Each household, whose average size of holding is just 0.8 hectare, in the adopted villages owns a livestock farm, mainly comprising cows and buffaloes.IANS

Pulses buffer stock

The Agriculture Ministry has moved a proposal to create a buffer stock of 3.5 lakh tonnes of lentils during the current 2015-16 crop year through domestic purchase or imports to prevent a further price rise in pulses.

“The Agriculture Ministry has sought inter-ministerial comments on a proposal to create a buffer stock of 3.5 lakh tonnes of pulses in 2015-16 crop year,” sources said.

Out of the proposed 3.5 lakh tonnes, about 1.5 lakh tonnes of tur and urad will be procured in the ongoing kharif marketing season and the rest 2 lakh tonnes of chana and masoor will be bought in the rabi marketing season.

These pulses will be purchased locally or through imports using the Rs.500-crore Price Stabilisation Fund and a scheme that supports MSP operations. Pulses will be procured both at the minimum support price as well as market rates.

The State-owned Food Corporation of India (FCI), Small Farmers' Agriculture-Business Consortium (SFAC) and Nafed will be engaged in the pulses procurement, they added.

In the ongoing kharif marketing season, which started last month, the Ministry has proposed that FCI will procure 1 lakh tonnes of tur and urad while Nafed and SFAC will buy 40,000 tonnes and 10,000 tonnes, respectively. In the rabi marketing season starting in March next year, Nafed will buy 1 lakh tonnes of pulses while FCI and SFAC will go for 90,000 tonnes and 10,000 tonnes, respectively.

Emphasising on the need to create buffer stock of pulses, the Ministry in the Cabinet note has argued that assured procurement of lentils at MSP will attract more farmers to take up pulses cultivation, which in turn would boost domestic supply and help control prices.

The need for creating the buffer stock arose as retail prices have gone through the roof due to a fall in domestic output by two million tonnes in 2014-15 crop year (July-June) and a global shortage.

For instance, retail tur and urad prices have jumped sharply up to Rs.190-200 a kg despite government measures to check hoarding and imports.

Pulses production fell to 17.20 million tonnes in 2014-15 crop year due to poor rains, against 19.25 million tonnes in the previous year. The country imported more than 4 million tonnes during the last fiscal and traders expect imports to cross 5 million tonnes this fiscal.

Despite a higher MSP, the pulses cultivation has not scaled up to meet the growing demand because of inadequate supply of pulses seeds in the country. Worse, pulses are more prone to pest attacks unlike other crops and are mostly grown in rain-fed areas.

High input cost for paddy cultivation leaves little for farmers in Odisha

Agriculture seems to have been reduced to a traditional compulsion rather than an economic option in Odisha.

An analysis says that a farmer in Odisha would earn a profit of Rs.3,000 per acre of paddy cultivation after toiling months in the field as input cost has gone up sharply in past decade. While present cost of cultivation per acre is estimated at Rs.17,000, the farmer gets yield around 15 quintal of paddy per acre of land which fetch him around Rs.20,000.

According to Orissa University of Agriculture Technology (OUAT), till 2011-12, the cost of cultivation for one acre of land in Odisha was Rs.1,4439.26 and given then minimum support price for paddy at Rs.1,110, farmers were getting Rs.16,650 per acre. Thus the net profit was around Rs.2,000.

OUAT had then arrived at a calculation that a farmer was spending Rs.1,225 per quintal of paddy while the MSP for paddy was fixed at Rs.1,280 leaving slender profit.

“The paddy cultivation during Kharif season has become non-remunerative. The earning margin per acre of paddy cultivation ranges from Rs.2,000 to Rs.5,000 depending on the weather condition, land fertility and wage components,” said S. K. Tripathy, head of department of agricultural economics of OUAT’s College of Agriculture.

Prof Tripathy said the cost of paddy cultivation in 2004-05 was Rs.7,295 per acre which sharply rose to Rs.14,439 per acre in the year 2011-12. If monsoon become erratic or any disaster strikes, the slender profit margin in paddy cultivation get wiped out.

According to OUAT analysis, farmers make profit in Rabi crops. But irrigation facilities are not available in all pockets.

Although MSP was determined according to the rise in input cost, but cost of inflation with regards to other necessary commodities a farmer purchases from market other than rice was never taken into consideration.

The outcome is visible. Majority of farmers and agricultural labourers are leaving their villages to participate in more remunerative off-farm works. Emphasis on agro-processing, diversification of cultivation and value addition measures are some measures by which the government could reverse the exodus of farmers, said Prof Tripathy.

Basmati growers blame cartels for low prices

"They are feeling cheated by the State government"

After cotton farmers, basmati growers in Punjab and Haryana are in for a shock as popular aromatic rice varieties like PUSA 1121 are fetching "far lower" prices than what they got last season.

While growers accuse rice exporters of indulging in cartelisation for distress sales, exporters blame weak global demand and oversupply for the "basmati crisis".

Disappointed with "low" prices for their crop, farmers' unions have now decided to launch an agitation against the government which encouraged growers to switch over to premium varieties but failed to ensure profitable prices.

Popular basmati variety PUSA 1121, which has started arriving in mandis of Punjab and Haryana, is priced in the range of Rs 1,300 to 1,800 per quintal against Rs 3,000 per quintal last season, traders said.

Similarly, another variety PUSA 1509 is hovering around Rs 1,200-1,300 per quintal.

However, after the intervention of Punjab and Haryana governments, this variety is now being purchased at MSP rate.

“First cotton farmers faced heavy losses because of crop damage. Now rice farmers are in problem as they are unable in getting good price for their crop which they had sown under the crop diversification programme. They are feeling cheated by the state government,” Bhartiya Kisan Union (Ugrahan) general secretary Sukhdev Singh Kokri said on Sunday.

Stir planned

Mr Kokri said as many as 12 outfits, including four farm labour organisations, will launch a three-day sit-in starting November 4 at Moga and Amritsar, which are in the basmati growing belts of Punjab.

“We demand Rs 5,000 per quintal for PUSA 1121 and Rs 4,500 per quintal for PUSA 1509 variety,” Mr Kokri said.

Rice growers accused exporters of making “high profits” by way of forming a “cartel”, thereby forcing them to sell crop at lower rates.

“If prices of basmati paddy have come down from Rs 40 per kg to Rs 18 per kg then why retail price of basmati rice could not drop in the same way?

Consumers are still purchasing basmati rice at same rate of Rs 80-100 per kg,” said Puneet Singh Thind, convener of Rashtriya Kisan Sangathan.

With basmati not turning out to be profitable, farmers will again switch to water-consuming normal varieties of paddy which at least ensures minimum support price.

“With the kind of rates farmers are getting for their basmati crop, they will stop growing it and shift to ordinary varieties,” said an official of Punjab agriculture department in Amritsar.

Amritsar district is one of the leading producers of basmati in Punjab. Out of the total area of 1.80 lakh hectares under paddy in Amritsar, basmati is sown under 1.36 lakh hectares this year.

'Weak demand'

Rice exporters ascribed low rate of basmati to weak global demand and heavy inventory of crop.

"There is weak demand for basmati in overseas markets at present. For example, Iran has not yet started placing orders.

Basmati market in countries like Iraq and Yemen has shrunk which also led to dip in demand for Indian basmati," said Kohinoor Foods Joint MD Gurnam Arora.

"Heavy inventory is lying with exporters," Mr Arora said, adding that prices of all commodities in international markets were down.

Total basmati area in Punjab and Haryana is about 8 lakh hectares and 6 lakh hectares respectively.

"With the kind of rates farmers are getting for their basmati crop, they will stop growing it and shift to ordinary varieties"

Scientists find lac insects in Vellore

Discovery brightens scope of its cultivation in the State for commercial purposes

Scientists from ICAR-IINRG – Vaibhav D. Lohot and A. Mohanasundaram discovered lac insects in the peripheral areas of Jawadhu hills, Gandhi Nagar, CMC and Vellore Fort on rain tree and pipal tree during a survey.

Two scientists from the Indian Council of Agricultural Research (ICAR)-Indian Institute of Natural Resins and Gums (IINRG), Ranchi, have

discovered lac insect on rain tree and pipal tree in the peripheral areas of Jawadhu Hills, Gandhi Nagar in Katpadi and Vellore Fort.

Lac is a natural resin secreted by a tiny insect – Kerria lacca (Kerr) for its own protection. This was an important resin because it was commercially used in various industries such as food, pharmaceuticals, cosmetics, varnishes, sealing wax, lubricants and insulating materials.

In fact, the resin was a major source of livelihood for tribals in Jharkhand, Chhattisgarh, Odisha and West Bengal as it was traditionally used in making jewellery, according to the scientists.

The scientists from ICAR-IINRG – Vaibhav D. Lohot (plant physiology) and A. Mohanasundaram (entomology) - came across the lac insect and their host plants during a survey across various parts of Vellore district including Yelagiri hill, Alangayam, Tirupattur, Vaniyambadi and Gudiyatham, and Kancheepuram and Tiruvannamalai districts, from October 28 to 31.

“We have conducted surveys across Tamil Nadu. We had carried out surveys in Madurai and Theni in 2011 and in Salem in 2014 and found the insect on Rain tree, known as ‘Thoongu moonchi maram’ in Tamil,” Mr. Mohanasundaram said.

Now, the two scientists, said, for the first time, they have found the lac insect and their host plants in the peripheral areas of Jawadhu Hills that is Venkatesapuram, Gandhi Nagar in Katpadi and Vellore Fort. It was found on Rain tree and Pipal tree (‘Arasa maram’), he added. The insect’s host plants were also observed during the survey.

He said the resin had medicinal value and was used in creams for treating cracked heels, tablet coating and also in Ayurveda.

Lac insect was reported in the State from the 1930s. However, over the years, lac insect cultivation has lost importance in the State, and people were not aware of it now, leading to disappearance of the insect from southern parts of India, the scientists said.

It is here that ICAR-IINRG has been playing a pivotal role. With India being a leading producer and exporter of lac resin in the world, ICAR-IINRG that was established in 1924 is exclusively dedicated to lac insect cultivation. The institute has been taking up exploration, collection and conservation of lac insect and host plants throughout the country on a regular basis.

“This exploration activity was mainly taken up to conserve lac insect, its host plant biodiversity from extinction,” he said.

High temperatures

With this discovery, the scientists will be taking samples of the insect for morphology and molecular study. “The insect is usually found in areas where the temperature is between 36 and 37 degree Celsius. We will also study how it exists in a place like Vellore where temperature levels are high,” he added.

This discovery, they say, has brightened the scope of lac cultivation in the State and will provide income source to many people.

They will return to collect samples of broodlac, matured mother cells, to look into the scope for cultivation.

Turmeric auctioned for Rs. 1.75 crore

Turmeric was auctioned for Rs. 1.75 crore at the Tiruchengode Agricultural Producers Cooperative Marketing Society here on Saturday.

While 'Virali' variety fetched a price between Rs. 6,215 and Rs. 9,637 per quintal; the 'kilangu' variety fetched a price between Rs. 5,600 and Rs. 8,599 and 'Panakali' variety fetched a price between Rs. 6,666 and Rs. 18,719. About 3,900 quintals of turmeric were auctioned for Rs. 1.75 crore, a press release of the society issued here said.

Coconut kernels were auctioned for Rs. 3.50 lakh at the Mallasamudram branch of the Tiruchengode Agricultural Producers Cooperative Marketing Society on Saturday. While first quality coconut kernels fetched a price between Rs. 60 and Rs. 67.65 per bag, the second quality fetched a price between Rs. 35 and Rs. 46.65. About 80 bags of coconut kernels were auctioned for Rs. 3.50 lakh, a press release said.

Coconut kernels were auctioned for Rs. 3.50 lakh

Farmers given training to produce quality seeds

Farmers of Thookanaickenpalayam were exposed to the methodology of enhancing yield of paddy and other crops through use of certified seeds, earlier this month.

Under the aegis of Seed Village Scheme, the farmers were initiated into producing quality seeds in their lands for own use and for distribution to other farmers by Agriculture Department, Myrada Krishi Vigyan Kendra and Tamil Nadu Agricultural University.

TNAU Assistant Professor Rajavel provided insights into the weather pattern and its impact on productivity, and Assistant Director of Agriculture Chidambaram elaborated on certified seeds while Soil Scientist of Myrada Sekar detailed on nutrient management.

Introduced during May, 2012, the scheme entailing distribution of foundation seeds of paddy, millet, pulses and oilseeds at 50 per cent subsidy on cost of production is valid until the end of 2016.

According to officials, the improving stock of farm-saved seeds will help in enhancing crop productivity. The seed produced in the villages will have to be preserved till the next sowing season.

Forty seed farmers who received training were encouraged to develop storage capacity with promise of assistance for making bins made of mud and paper pulp.

As per the scheme, a project area should receive assistance for a maximum of two years, so that identified farmers could sustain seed production independently.

Topics on seed production technique, isolation distance, sowing practices and other agronomic practices to be followed were handled during the training programme.

The farmers will be imparted two more days of training: the second during flower initiation stage of the seed crop to help them identify off-types and their removal, plant protection and harvesting methods, and the third training will be conducted after harvest at the time of seed processing to throw more light on seed cleaning, grading, storage, packaging, and sending seed sample for testing of germination, officials said.

The farmers of Thookanaickenpalayam were initiated into producing quality seeds in their lands for own use and for distribution to other farmers

Modernisation of Bennethora irrigation project to begin soon

The right bank canal of the Bennethora Major Irrigation Project has been damaged in several places with missing concrete linings allowing seepage of water into the agricultural fields, thereby damaging standing crops, in Kalaburagi district.

The final hurdle for taking up the modernisation of the canal and distributary network of the long-pending Bennethora Major Irrigation Project in Kalaburagi district has been cleared.

The technical evaluation report was submitted to Karnataka Neeravari Nigam Ltd. for final approval on October 16 after opening the technical bid for the project.

Sources in the Kalaburagi Irrigation Project Zone said that giving approval to the technical evaluation report by the managing director of KNNL was only a formality now.

Once it was received, the work on the modernisation of the right and left bank canals and distributaries in both the canals would begin at a cost of Rs. 171.37 crore.

Initial cost

Initially, the cost was put at Rs. 150 crore. But, a team of technical experts, who visited the project increased it to Rs. 172.12 crore taking into account the enormity of the work and other factors. Although the modernisation work has been technically sanctioned at a cost of Rs. 172.12 crore, the amount floated in the tender was Rs. 171.37 crore.

The last date for submission of the tenders was October 7 and the tender documents were opened on October 9. The Bennethora Major Irrigation project, taken up in 1972 as a drought relief work, got bogged down due to various reasons including lack of financial allocation.

The canals and distributaries, constructed even before impounding of the water in the Bennethora dam, were damaged due to the rigours of time.

Moreover, the lining of the canal and distributaries were done with the help of Shahabad stone slabs which had been damaged over a period of time.

Previous attempts to release water in these old canals resulted in leakage into agriculture fields, damaging standing crops.

To overcome this problem once and for all, KNNL decided to take up the modernisation of the canals, which included removing the Shahabad stone slab linings and replacing them with reinforced cement concrete linings up to 62.82 km of the 82.16-km-long right bank canal and up to 50 km of the 62.24-km-long left bank canal and the distributaries to prevent seepage of water into agricultural field, reconstruction of damaged cross drainages and aqueducts and repair of road bridges. The project has been allocated 5.29 tmcft water and is designed to provide irrigation facilities to around 21,000 hectares of parched land in drought-prone Chitapur and Sedam taluks.

National fisheries policy

Suggestions invited

The Department of Animal Husbandry, Dairying and Fisheries, under the Union Ministry of Agriculture, has called on stockholders and the public at large to send in their views, opinions and suggestions on the proposed revised national marine fisheries policy.

The policy will be drawn up by a committee of experts chaired by Director General of Indian Council for Agricultural Research S. Ayyappan.

The suggestions can be sent both in the printed format and online. The website is cmfri.org.in/survey/survey.php. The questionnaire is available in different languages, including in Malayalam.

The government has decided to go in for a revised policy after the Meenakumari Committee report on marine fisheries triggered a wave of protest across the country.

The suggestions must reach Director, CMFRI, PB No. 1603, Ernakulam North PO, Kochi by December 10. – Special Correspondent

Packaged cow products in market soon

Here are good tidings for the growing community of organic farmers, especially in the city.

Packaged cow products from the Ernakulam Krishi Vigyan Kendra (KVK) are expected to hit the market soon and Green Remedies, a combine of agricultural officers in the district, plans to launch bio-pharmacy services to make farm remedies available on a real-time basis.

These efforts, while propping up the movement towards organic farming, are also expected to stem the tide of spurious and inferior quality organic inputs now available freely in the market.

Cow urine and dung

A scientist attached to KVK said the Kendra, attached to Central Marine Fisheries Research Institute (CMFRI), would bring to the market dried and packaged cow dung and cow urine soon.

Cow dung tops up soil nutrients and maintains microbial population and cow urine helps boost vegetative growth and also keeps insects away, the KVK scientist said.

Farmer producer company being floated at Zaheerabad

Seeds, chemicals and fertilizer to be supplied to the members as well as other farmers

A farmer producer company (FPC) is being floated for the first time in Telangana to carry out commercial production of potato and red gram seed in Zaheerabad of Medak district in the next few months.

The existing farmers' clubs in the area with a membership of 10 to 25 will be involved in the running of the company.

An umbrella organisation of the clubs 'Zaheerabad Mandal Farmer Clubs Federation' will act as the facilitator to secure loans for the company. Presently, the federation is having about 300 members and efforts are on to increase it to 500. Each member is paying equity share amount of Rs. 1,000 and so far the amount collected stood at about Rs. 3 lakh.

Matching grant

Once the equity touches Rs 10 lakh, the National Bank for Agriculture and Rural Development (NABARD) will release a matching grant under Equity Grant Fund (EGF). That would be sufficient for the FPC to be eligible for credit guarantee of Rs. 85 lakh.

The farmers from Govindapur who had an exposure visit to Prakasham district in Andhra Pradesh to study about the functioning of FPC there decided, in principle, to enter into the business of potato and red gram seed production as part of their expansion plans.

Recently the federation even conducted elections and had its own panel of office-bearers. Collector D. Ronald Rose who visited the village a week ago promised to extend all the required help in promoting the FPC and asked the farmers to draw inspiration from the community at Ankapur in Nizamabad district to be united in their efforts.

“Here the farmers are showing zeal and commitment to promote the company and enter into viable business including supply of seeds, chemicals and fertilizers to the members as well as other farmers. This will be first such company in Telangana being promoted by farmers,” G. Ramesh Kumar, AGM, NABARD, told *The Hindu* .

Downpour keeps fishermen off sea

Heavy rain lashes Tirunelveli, Pudukottai and Tuticorin districts

With the Northeast Monsoon bringing widespread but intermittent rain over the past few days in delta districts, paddy farmers are a happy lot.

As the Regional Meteorological Centre in Chennai forecast strong winds with speed occasionally reaching 45-55 km/hr along and off the South Tamil Nadu coast, fishermen in most coastal districts did not venture into the sea.

Many fishermen in Adiramapattinam, Mallipattinam, Sethubhavachatram in Thanjavur district as also Nagapattinam, Tranquebar, Poompuhar and Pazhayaru kept off the sea as high tidal waves lashed the coastal hamlets. In Chennai too, about 70 per cent of the crafts remained safely anchored.

Forecast of more rain for the State in the next few days has raised the children’s hopes of school holiday. Heavy downpour in Tirunelveli,

Pudukottai and Tuticorin districts resulted in a holiday being declared for schools there.

Several parts of Coimbatore received good rainfall on Friday. Pollachi received maximum rainfall - 32.3 mm - in the 24 hours that ended 8 a.m. Saturday. The Tamil Nadu Agricultural University campus and Periyanaickenpalayam received over 25 mm. Coimbatore South received 6 mm, airport 8.7 mm and Annur 2 mm.

In Madurai, the day started with moderate to heavy rainfall in many parts of the city from 7 a.m. A steady drizzle continued till about 11 a.m. Nagercoil received 88.6 mm.

In Tenkasi, heavy flooding in Courtallam Main Falls kept tourists away. Day 4 of the monsoon ‘slowed down’ Chennai as motorists and commuters were stuck in traffic on busy roads, many of which were considerably water-logged. Many motorists complained that it took twice the time to reach their destination

Redgram counters opened

People queue up at a special counter at Rythu Bazaar in Hyderabad on Saturday.

Special sale counters of redgram dal were opened at several places in Hyderabad and in districts on Saturday.

Grade-I redgram dal will be sold at Rs.135 per kg to consumers on producing identity card. The State Government has made the arrangement in association with the Telangana State Dall Millers & Traders Federation that has agreed to sell Grade-I redgram dal at Rs.135 per kg against Rs.200 to Rs.220 per kg being sold in the retail market. The association has assured the government that they would continue the sale through special counters till the stocks with them lasted.

In Hyderabad, Minister for Civil Supplies E. Rajender opened a counter at Erragadda Rythu Bazaar. He cautioned the traders against hoarding the redgram dal stocks and warned that serious action would be taken against such traders. He mentioned that below poverty line families were already being sold one-kg of redgram dal at highly subsidised rate of Rs.50 per kg per ration card every month.

The new initiative of the State Government would provide some relief to the middle-class people as they would not have ration cards. Deputy Chief Minister Md. Mahamood Ali opened at counter at Falaknuma Rythu Bazaar, Commercial Taxes Minister Talasani Srinivas Yadav at Bansilalpet and Telangana Secretariat and Minister for Excise T. Padma Rao at Addagutta.

Minister for Agriculture Pocharam Srinivas Reddy opened a counter at Nizamabad, while TRS legislator Chinta Prabhakar inaugurated one at Sangareddy Rythu Bazaar. President of the federation N. Madhusudhan said they would open special sale countries at 10 places in the City and in all municipal and mandal centres.

Production

According to official sources, the production of redgram this year is estimated at about one-lakh tonnes in the State due to reduced cultivation of pulses affected by poor monsoon. Similarly, the production of blackgram and greengram in kharif is estimated to be about 17,712 tonnes and 52,858 tonnes, respectively.

Meanwhile, the Union Agriculture Ministry (Directorate of Economics and Statistics) has estimated the production of redgram at 2.61 million tonnes against the target of 3.67 million tonnes. The production of greengram is also estimated to be 0.86 million tonnes against the target of 1.1 million tonnes in kharif. However, the production of blackgram is estimated to be 1.37 million tonnes against the target of 1.29 million tonnes.

MoU to promote research

The SMV Institute of Technology and Management signed an MoU with University of Agricultural and Horticultural Sciences (UAHS), Shivamogga, in order to promote collaborative project/research work and academic excellence, at Bantakal in Udupi district on Saturday. The MoU aims at achieving academic excellence through various joint initiatives.

Collector joins school students in sowing palm seeds

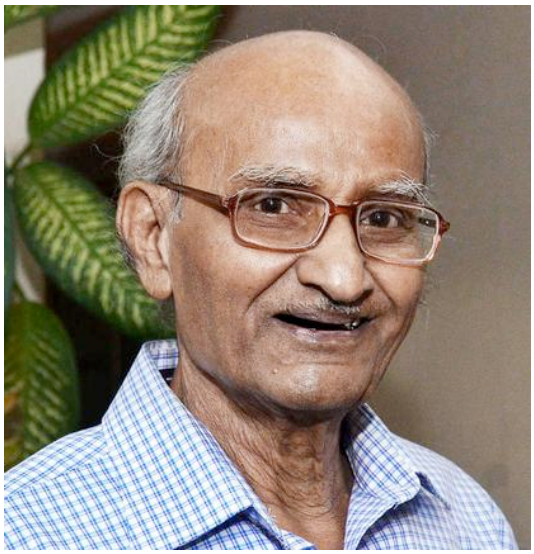
Having gathered 60,000 palm seeds, school students are into the process of sowing them throughout the district under the aegis of National Green Corps, Eco Clubs and National Service Scheme. District Collector S. Prabakar joined students of Government Higher Secondary School in Kumalankuttai on Friday in sowing the seeds. About 750 seeds were sown. During the farmers' grievances redressal meeting on Friday, participants urged the district administration to prevail upon local bodies to play a proactive role in the initiative to strengthen tank bunds and canal embankments. The Collector has asked departments of forest, agriculture, education and rural development to guide local bodies to sow the seeds and raise them close to water bodies by roping in school students and farmers of the area. The plan is to sow the seeds along the embankments of Lower Bhavani Project Canal, and embankments of tanks, besides the sides of National Highways and panchayat roads to restore the benefit of palm trees to agricultural eco system.

Cotton purchase centres opened

Minister for Agriculture Prathipati Pulla Rao said as many as 14 cotton purchase centres had been established in Guntur and Krishna districts.

The Minister was speaking to reporters after reviewing the purchase of cotton at a meeting with agriculture, marketing and Cotton Corporation of India (CCI) officials in Vijayawada on Saturday.

Cost-effective irrigation



The per hectare cost of such a model will be less than half of what the State Government is planning to spend on projects such as Pranahitha-Chevella and Palamuru-Rangareddy lift irrigation projects.T. Hanumantha Rao,World Bank consultant on Irrigation

HOW IT WORKS

Outflow of water after consumption for all purposes in areas with underground drainage system – 80 %; it's 50 % for areas with open drains

45 % of total irrigation in Israel is done with treated sewage water. Similar models implemented in several European countries and the US

Consumption of water in GHMC area is over 40 TMC ft now from sources including Manjira and Krishna rivers and groundwater. It's likely to go up with Godavari water

Entire planned ayacut irrigated with 100 % dependability in the model, unlike 75 % in projects with assured water and 25 % in projects with surplus water

NO STORAGE FACILITY (RESERVOIRS) NEEDED IN THE MODEL; LIFT IRRIGATION PROJECTS REQUIRE HUGE RESERVOIRS

t a time when the two Telugu States are vying with each other to take up new irrigation projects and to complete the pending ones, mostly without having assured water, a retired Engineer-in-Chief has designed a model to irrigate a sizeable extent of land with 100 per cent dependability with the treated sewage water from major municipal areas.

Dangers of untreated water

The model not only ensures assured irrigation of certain extent of land but also addresses the possible health hazards posed by flow of untreated sewage water in the surroundings of urban areas. There are several studies how toxicity in the untreated sewage water from urban areas is spoiling the soil and how toxic residue is creeping into fodder, vegetables and other crops cultivated with such water.

According to T. Hanumantha Rao, who retired as Irrigation ENC of Andhra Pradesh over a decade ago, assured that irrigation projects could be taken up with treated sewage water from Hyderabad, Warangal and Nizamabad in Telangana and Visakhapatnam, Rajahmundry, Vijayawada, Nellore, Kurnool, Tirupati, Anantapur and other cities in Andhra Pradesh.

Giving the example of 100 per cent dependable irrigation model with the treated sewage water from GHMC (Hyderabad) area, Mr. Rao told *The Hindu* that it could irrigate 3 lakh acres in Nalgonda district with gravity flow. “The per hectare cost of such a model will be less than half of what the State Government is planning to spend on projects such as Pranahitha-Chevella and Palamuru-Rangareddy lift irrigation projects”, he stated.

The cost of irrigation under the ongoing Pranahitha-Chevella project is estimated to be Rs.7.8 lakh per hectare and Rs.7.5 lakh under Palamuru-Rangareddy.

However, the model designed by Mr. Hanumantha Rao cost only Rs.3.25 lakh per hectare. He has sent the proposed model to the governments of the two States.

Explaining the model, Mr. Hanumantha Rao said over 40 TMC ft of water is being consumed by people in GHMC areas for drinking and other needs every year and the underground drainage system allows flow of over 32 TMC ft in drains after usage.

As the capacity of sewage treatment plants was only for 8 TMC ft now, the remaining quantity is flowing untreated into drains and finally to the Musi river in Nalgonda district.

"The treatment of remaining quantity of untreated sewage water requires an investment of Rs.2,723 crore and the line estimate for distribution network at field-level needs another Rs.1,227 crore," Mr. Hanumantha Rao, who is also Consultant on Water Resources to the UN (Operation Project Services) and to Rajasthan Government on watershed, Mr. Hanumantha Rao explained.

The per hectare cost of such a model will be less than half of what the State Government is planning to spend on projects such as Pranahitha-Chevella and Palamuru-Rangareddy lift irrigation projects.
T. Hanumantha Rao,World Bank consultant on Irrigation

Tirunelveli farmers gear up for pisanam paddy season

The district experienced widespread rainfall on Saturday as northeast monsoon became active in the southern Tamil Nadu, much to the jubilation of farmers and residents.

After intermittent drizzle in the early hours of Saturday, it began to rain heavily in the morning around 7 a.m. Though the spell lasted for just 20 minutes, the heavy downpour caused water stagnation in several parts of Tirunelveli and Palayamkottai. The residents were very much delighted over the rains as it would have recharged the groundwater table to a greater extent.

After all waterfalls in Courtallam experienced flood following overnight rains in the Western Ghats, visitors were not allowed to take bath in the Main Falls and two branches of Five Falls in the morning. However, tourists took bath in the Old Courtallam Falls and Tiger Falls.

As the situation improved around 11 a.m., visitors were allowed to take bath in all branches of Five Falls and the ban was lifted at Main Falls around 4.30 p.m.

Collector M. Karunakaran declared holiday for all schools in the district as rain lashed several parts of the district after 7 a.m. on Saturday. However, there was no drizzle throughout the day and the sun was bright after 3 p.m.

Though the farmers were jubilant about starting their pisanam paddy season on a high note, the downpour affected the ongoing harvest of kar paddy in several places. As the field became slushy and the crop got damaged in the overnight rains, farmers could not use the harvesters in the marshy fields where the crop was ready for harvest.

“While the monsoon will be very much helpful for the next crop season (pisanam), it has badly hit the ongoing harvest of kar paddy,” said farmer N. Murugan of Arugankulam near Tirunelveli.

The downpour affected the ongoing harvest of kar paddy as fields became slushy and crop got damaged

Periyar dam level rises by four ft in 48 hours

Sothuparai dam records 100 mm rainfall

With good rain on the Western Ghats and in the interior areas of Kerala, water level in Periyar dam rose by about four feet in the last 48 hours, cheering farmers and bringing a sigh of relief to officials in municipal, town and village panchayats in the district on Sunday.

Water level in Periyar dam stood at 122.8 feet, with an inflow of 4,868 cusecs and a discharge of 511 cusecs. Storage was 3,182 mcft.

The level in Vaigai dam was 46.88 feet, with an inflow 735 cusecs. Water discharge was scaled down to 460 cusecs from 960 cusecs.

Sothurparai dam recorded 100 mm rainfall, the highest rainfall in the district in the last 24 hours.

Inflow into the dam was 128 cusecs and the discharge three cusecs. Storage level touched 100 feet against the maximum level of 126 feet.

Water level reached its full capacity of 56.8 feet in Manjalar dam on October 11. This level has been maintained to date owing to heavy rain in the catchment areas. The entire inflow of 172 cusecs has been discharged into Manjalar river.

While farmers in rain-fed areas welcomed the rain, paddy growers in Cumbum valley are a worried lot as harvesting of the first crop in certain pockets is not over. Intermittent showers turned the field slushy and muddy, disrupting mechanical harvesting.

Periyar dam recorded a rainfall of 17.8 mm, Vaigai dam 38.6 mm and Thekkadi 15.8 mm.

Dindigul

Dindigul district experienced sharp showers on Saturday night and mild showers since Sunday morning. Total rainfall recorded in the district was 215.5 mm. Power cut owing to heavy rain affected life in Kodaikanal. Road-users were worst affected as mist and rain obstructed view on Kodaikanal Ghat Road. Rainfall recorded in various parts of Dindigul district at 8 a.m. on Sunday was (in mm): Dindigul – 7.7, Kodaikanal – 72, Natham – 2.5, Nilakottai – 14, Palani – 24.5, Vedasandur – 23, Vedasandur Tobacco Research Station – 25.4, Chatrapatti – 26, Kodaikanal Boat Club – 10.4 and Kamatchipuram – 10.

India may need to import 10 million tonnes of pulses

Considering deficit in rainfall, it is expected that production of pulses for the year would decline slightly to 17 million tonnes.

India may have to import a large quantity of 10 million tonnes of pulses if the domestic production-consumption mismatch has to be bridged, leaving the government with a daunting task, an Assocham study has said.

“Considering deficit in rainfall for 2015-16, it is expected that the production of pulses for the year would decrease slightly to 17 million tonnes as against 17.2 million tonnes recorded in 2014-15. Further with the rise in demand it is expected that a total of 10.1 million tonnes of pulses might have to be imported,” the paper noted.

But given the global supply constraints, the demand-supply gap may be difficult to achieve this year. “While we are coping with the difficult situation this year, we cannot afford to continue with it since shooting prices of essential food items create adverse eco system and negative discourse. Besides, it adds to food prices which cannot be allowed again to creep into the main inflation,” Assocham Secretary General Mr. D.S. Rawat said.

Maharashtra is the largest kharif pulses producer in the country followed by Karnataka, Rajasthan, Madhya Pradesh and Uttar Pradesh. The respective shares of these major states in total kharif pulse production are 24.9, 13.5, 13.2, 10 and 8.4 per cent respectively. These five States together account for about 70 per cent of the country’s total kharif pulse production.

All these states have witnessed weather related issues affecting the production, the paper said.

The issue of meeting the domestic demand for pulses goes beyond facing the challenge of footing increased import bill. The efficient distribution of available pulses across regions is going to be the biggest challenge to the policy makers.” Therefore, it would remain a challenge for the Central and state governments to ensure significant improvement in the pricing situation. The inefficient supply systems coupled with inherent weaknesses in regional markets in India are expected to further contribute to problem”.

Besides, from the long term perspective, excessive imports would affect India’s efforts towards achieving self sufficiency, ensuring rural livelihood and ensuring country’s nutritional security. Therefore, the Government must prepare an implementable action plan to incentivise farmers to cultivate more pulses by providing seeds and technical support, the chamber added.
The major pulse crops grown in India are gram and tur.

Gram, with a production of more than seven million tonnes, contributes more than 41 per cent in the total pulse production of the country. Tur, with a production of 2.7 million tonnes and a contribution of about 16 per cent, is the second major pulse crop. Other leading pulse crops in India are urad and moong.

EXPECTED IMPORTS

	2011-12	2012-13	2013-14	2014-15	2015-16
Production (million tonnes)	17.09	18.34	19.25	17.2	17
Imports (million tonnes	2.8	3.2	3.4	4.4	
Population ('000)	12,01,863	12,13,370	12,28,785	12,44,036	12,44,036
Per capita net availability (Grams per day)	43	41.7	43.3	47.2	
Per capita consumption (kg)	20.8	21.0	21.3	21.6	21.8
Monthly per capita consumption expenditure (Rs.)	96.0	108.9	23.5	140.0	158.8
Total consumption demand (million tonnes)	25.0	25.5	26.2	26.8	27.1

Source: Ministry of Agriculture, Government of India

Sale of subsidised toor dhal from today

To be sold at Rs. 110 a kg through Coop. outlets

Starting Sunday, consumers in major cities in the State can procure *toor dhal* at Rs. 110 a kilo.

Chief Minister Jayalalithaa had recently announced that imported toor dhal would be made available through 91 cooperative outlets. She had made the announcement following a steep increase in prices of pulses in the open market due to poor crops in other States in the country. At present, toor dhal is being sold at Rs. 190–200 a kg in retail stores.

A press release from the government said in Chennai 56 outlets of Amudham, Chintamani, TUCS and other cooperative society stores would stock the dhal.

In Madurai, Madurai Pandian Cooperative Wholesale Store, TVS Cooperative Society and Madura Coats Employees Cooperative Society would stock the dhal. For the convenience of consumers, toor dhal would be available in half and one-kg packs.

At present, it is being sold at Rs. 190–200 a kg in retail stores

Farmers happy over timely rains in Tuticorin district

Dam levels rising owing to heavy downpour in Kanyakumari district

Rain water stagnating on St.Peter's Street in Tuticorin on Saturday.

Heavy rains lashed Tuticorin and various parts of the district since Friday night. The downpour that began around 11.45 p.m. continued till 8.30 a.m. on Saturday. The weather turned chill in the wake of rains and the people were a happy lot. However, the continuous downpour left a tree opposite Rajaji Park on Palayamkottai Road uprooted.

Several low lying localities were inundated and arterial roads leading to Tuticorin town such as Palayamkottai road, George road, WGC road, Victoria Extension road and Tiruchendur road were waterlogged, throwing

vehicular traffic out of gear. The district administration declared holiday for all schools following incessant rains. The sky remained overcast.

Corporation Commissioner R. Poongodi Arumaikan told *The Hindu* that two vehicles were engaged in pumping out stagnated rainwater. Fifty-two trips had been made to pump out the water at various locations. Further, she said precautionary measures were being taken to prevent any outbreak of water-borne diseases.

On the other hand, farmers, who were solely dependent on rainfed cultivation, were delighted as the timely rains arrived to their expectations. Mostly, green gram, black gram, which require less water, were sown on rainfed tracts, including Vilathikulam, Pudur, Ettayapuram and its surroundings, S. Nallaiah, farmer of Ettayapuram, said. Expecting a better yield, other crops such as maize, cumbu and sorghum were also sown. This timely rain would certainly boost the yield of crops, he said.

Srivaikuntam received the highest rainfall of 100 mm in the district. Kayalpattinam stood next with 86.20 mm rainfall. Rainfall recorded in other rain gauge stations (in mm): Tuticorin 85.90, Tiruchendur 37.60, Kadalkudi 36, Vaippar 31, Vilathikulam 3.20, Kovilpatti 1, Ottapidaram 10, Sathankulam 8, Kulasekarapattinam 28, Keela Arasadi 5, Ettayapuram 4, Maniyachi 2, Vedanatham 20 and Surangudi 20.

R. Arivanantham reports from Nagercoil

Catchment areas of dams and hilly regions registered heavy rain on Friday night. Due to this, the water level of Pechiparai dam stood at 43.40 feet against its total height of 48 feet at 8 a.m. on Saturday.

Many parts of the district, especially catchment areas of dams, and hilly areas in western parts received heavy rainfall till 4 a.m.

The inflow into Pechiparai dam was 760 cusecs, and it was expected to increase steadily.

Water level of Perunchani dam stood at 75 feet against its maximum level of 77 feet. The inflow into the dam was 991 cusecs and the discharge was maintained at 1000 cusecs.

The water released from Perunchani dam was let into the Paraliar and the Tamirabharani in Kuzhithurai, resulting in flooding of the two rivers. Due to this, bathing in Thirparappu falls was banned on Saturday.

Flood warning has been issued to people living on the banks of the two rivers in Thirparappu, Thikkurichi, Attur, Gnaranvilai, Mangadu and Thengaikpattinam. Public in these towns have been informed that siren would go off as a warning.

Water level of other dams (full height in brackets): Chittar I 15.94 (18), Chittar II 16.04 (18), Poigai 12 (42.65), Mambazhathuraiaru 54.12 (54.12) and Mukkadal 25 (25).

Rainfall recorded in important stations (in mm) are: Kozhiporvilai 88.6, Adayamadai 75, Perunchani 71.4, Colechel 70.6, Puthananai 70.2, Mullanginavilai 68, Eraniel 62.4, Surulode 62, Chittar II 61, Chittar I 53.4, Anaikidangu 52, Mambazhathurairu 36.6, Mayiladi 26.2, Kurunthancode 22, Kannimar 19.2, Boothapadi 16, Nagercoil 14.6 and Poigai Dam 12, sources in WRO of PWD said.

Pond comes to the rescue of farmers

Under a new project in Uttar Pradesh, floodwater is diverted and later used for irrigation

Four blocks out of six in Rampur district are “dark zones,” which means there is overexploitation of groundwater. This is a cause for worry for the district administration that is grappling with the local penchant for growing water guzzling Poplar tree, sugarcane and paddy. Water for irrigation largely comes from tubewells and borewells.

While the district administration expressed their helplessness in persuading farmers to change their pattern of cultivation to conserve water, the Colombo-headquartered International Water Management Institute (IWMI) stepped in with an innovative pilot project in Jawaijadid (a village in Rampur) by diverting excess floodwaters for irrigation from a canal that emerges from the Kosi river.

Quality water ensured

Project director Paul Pavelic told *The Hindu* that the IWMI used innovative technology to impound excess canal waters in an abandoned gram sabha pond, which was being used as toilet by the villagers. While digging of ponds might be a routine affair under the MGNREGA, the IWMI's experiment is unique in that it has introduced processes for desiltation and sedimentation to purify the water so that quality water is made available for irrigation.

The initiative called Underground Taming of Floods for Irrigation (UTFI), involves diverting excess floodwater from canals and recharging groundwater via village ponds that are modified. Jawaijadid was selected after an intensive study of drainage density, flood frequency, rainfall, land use, geology, slope, soil and groundwater level. Not all flood-prone basins would qualify though. Kosi basin in Bihar, for instance, may not qualify for the experiment because groundwater levels are "shallow," site experts told*The Hindu*.

Since there were no excessive floods this year in Jawaijadid, source water was transported to the pond through a de-siltation chamber from a nearby irrigation canal and necessary recharge shafts were constructed for purifying water through sedimentation. Water is allowed to percolate through the ground filling up local aquifers and raising the groundwater level in the process. The water can be pumped during dry season for irrigation.

Three-month effort

Waste water and filth in the pond was removed through concrete drains. It took nearly three months to prepare the pond with the help of machines and village community.

“This is an exciting concept which has never really been done before and whose benefits go directly to local communities,’’ said Mr. Pavelic. “Putting this into practice will save on the large funds spent each year on relief and restoration efforts of flood victims and on subsidies for groundwater extraction during non-rainy season. We hope our approach would tackle the root cause of the problem rather than the consequences.” The cost of the project is being worked out.

During a meeting with the village community, Mr. Pavelic, soil scientist S.K. Mishra and Krishi Vigyan Kendra in charge Laxmi Kant were besieged with questions from the local community about the longevity of the project, its maintenance, monitoring, benefits, quality of water and the levels of water recharge.

Mr. Pavelic said the project was still in the pilot stage and hence it was premature to answer questions about the area coverage and levels of water recharge. “We want to see this innovation upscaled and replicated. Sustainability is the key to the project,’’ he said.

While the Chief Development Officer of the district, Amit Kishore, wanted a more direct and intensive involvement of the local community in the construction of ponds, Ram Das, a daily agriculture worker told *The Hindu* that already the water level in the wells in the vicinity had risen and the project was promising.

Buffer stock of 3.5 lakh tonnes for lentils proposed

1.5 lakh tonnes of toor and urad to be procured in the ongoing kharif marketing season; two lakh tonnes of channa and masoor to be bought in the rabi marketing season.

The Agriculture Ministry has moved a proposal to create a buffer stock of 3.5 lakh tonnes of lentils during the current 2015-16 crop year through domestic purchase or imports to prevent a further price rise in pulses.

With retail prices skyrocketing to about Rs. 200 per kg, the Centre had last month announced that it will create a buffer stock of lentils and the same will be offloaded in the market should prices firm up.

“The Agriculture Ministry has sought inter-ministerial comments on a proposal to create a buffer stock of 3.5 lakh tonnes of pulses in 2015-16 crop year,” sources said.

Out of the proposed 3.5 lakh tonnes, about 1.5 lakh tonnes of toor and urad will be procured in the ongoing kharif marketing season and the rest two lakh tonnes of channa and masoor will be bought in the rabi marketing season.

These pulses will be purchased locally or through imports using the Rs 500-crore Price Stabilisation Fund and a scheme that supports MSP operations. Pulses will be procured both at the minimum support price as well as market rates.

The State-owned Food Corporation of India (FCI), Small Farmers’ Agriculture-Business Consortium (SFAC) and Nafed will be engaged in the pulses procurement, they added.

In the ongoing kharif marketing season, which started last month, the ministry has proposed that FCI will procure one lakh tonnes of toor and urad while Nafed and SFAC will buy 40,000 tonnes and 10,000 tonnes, respectively.

In the rabi marketing season starting in March next year, Nafed will buy one lakh tonnes of pulses while FCI and SFAC will go for 90,000 tonnes and 10,000 tonnes, respectively.

Emphasising on the need to create buffer stock of pulses, the ministry in the Cabinet note has argued that assured procurement of lentils at MSP will attract more farmers to take up pulses cultivation, which in turn would boost domestic supply and help control prices.

The need for creating the buffer stock arose as retail prices have gone through the roof due to a fall in domestic output by two million tonnes in 2014-15 crop year (July-June) and a global shortage.

For instance, retail toor and urad prices have jumped sharply up to Rs. 190-200 per kg despite government measures to check hoarding and imports.

Pulses production fell to 17.20 million tonnes in 2014-15 crop year due to poor rains, against 19.25 million tonnes in the previous year. The country imported more than 4 million tonnes during the last fiscal and traders expect imports to cross 5 million tonnes this fiscal.

Despite a higher MSP, the pulses cultivation has not scaled up to meet the growing demand because of inadequate supply of pulses seeds in the country. Worse, pulses are more prone to pest attacks unlike other crops and are mostly grown in rain-fed areas.

Sale of subsidised toor dhal begins

Good response:Sale of subsidised pulses at an outlet of Pandian Cooperative Society in Madurai on Sunday.

There was a steady stream of customers at outlets

Sale of subsidised toor dhal through Tamil Nadu Cooperative Federation began in the district on Sunday.

The sale was carried out by 11 outlets of seven cooperative societies in the district, including those in K.K. Nagar, Ponnagaram, Vasantha Nagar, Race Course, Bypass Road, Tirunagar, Alagappan Nagar, K. Pudur and TVS Nagar in the city, and Tirumangalam.

There was a steady stream of customers at the outlets where the pulse was sold in packets at subsidised rates of Rs. 110 per kg and Rs. 55 for half kg. The State government announced the move to sell toor dhal at subsidised rates after a sharp increase in prices of pulses in the markets recently.

S.R. Venkatesan, Joint Registrar of Cooperative Societies, said that around 2.5 tonnes of pulses were sold in the district till 4 p.m.

“The response is positive. More buyers are expected in the next few days,” he said.

While the district received five tonnes of toor dhal on Sunday, another five tonnes were expected on Monday. “One can buy only one kg at a time. Until

there is official word, the sale of pulses at subsidised rates will continue and we will get more stock based on demand," Mr. Venkatesan said.

Farmers' representatives want check in adulteration of jaggery

A section of the farmers who participated in the farmers grievances day meeting held at the Collectorate in Salem .

Adulteration in the preparation of jaggery is a serious crime. Those indulging in the act should be punished severely. Farmers representatives made a forceful plea to the government authorities to take effective steps to check adulteration in the preparation of jaggery.

The jaggery manufacturing units have brought down the usage of sugarcane to a big extent, due to which the price of sugarcane has come down drastically badly hitting the cane farmers, they said.

R. Murugesan, president of the District Coconut Producers Association, raised this issue at the farmers grievances day meeting held here on Friday. He said the jaggery manufacturing units have been using sugar instead of sugarcane. Due to this, the price of sugarcane has crashed from Rs. 3,000 per tonne to a meagre Rs. 1,200 per tonne.

He sought action against the jaggery manufacturing units under the Prevention of Food Adulteration Act.

C. Vaiyapuri, president, United Farmers Association – Tamil Nadu, and other farmers representatives supported the views of Mr. Murugesan. Mr. Vaiyapuri said adulteration in the preparation of jaggery was a serious crime and sought severe punishment including imprisonment to those indulging in this act.

T. Anuradha, District Designated Officer, Tamil Nadu Food Safety and Drug Administration Department, said that her department officials conducted series of raids in the jaggery units five months ago, due to which adulteration in the preparation of jaggery was brought down to a big extent.

She assured formation of special squads to check usage of sugar in the preparation of jaggery.

S. Jayaraman, president, Salem district Uzhavar Mandra Koottamaippu, complained that some of the departments were not giving priority for replying to the petitions presented by the farmers at such meetings. He demanded formation of a special committee to ensure that all departments gave proper reply to the farmers in time.

N. Elango, Joint Director of Agriculture, urged the officials to accord priority for giving proper reply to the farmers petitions.

Mr. Jayaraman also raised the issue of encroachment upon by some vested interest persons in the water body poramboke in Vasishtanadhi river in Idaiyapatti Thumbal. V. Sampath, Collector, said that the High Court has directed stringent action against all those who had encroached upon water bodies. Mr. Sampath assured formation of a team comprising Revenue, PWD and police officials to conduct spot inspection and take immediate action.

N. Perumal, president, Salem Mavatta Vivasaya Sangam, and N. Krishnamoorthy of Thumbal, complained that the primary milk cooperative societies continue to refuse to procure additional milk from the farmers. He called upon the district administration to bring to this to the notice of the State Government.

Kalamathi, Extension Officer, Aavin said that Salem Aavin has been procuring additional 1.25 lakh litres of milk daily.

Mr. Perumal also pleaded with the government to write off all the farm loans taking into consideration the severe drought conditions. He said that milk powder sachets of other states are being sold in the district. Aavin should take similar steps to market its milk powder, which will augment its revenue and also provide jobs to the youth.

A.R. Shanmugam of Panamarthupatti demanded steps for installing rain gauge equipment in all the village panchayats. Mr. Elango, JD of Agriculture replied that M. S. Swaminathan Foundation in association with Rotary International, has installed rain gauge equipment in all taluks in Namakkal district. The agriculture department will approach the Foundation for similar initiative in Salem district.

Adulteration in the preparation of jaggery is a serious crime. Those indulging in the act should be punished severely

Over two tonnes toor dhal sold on first day

Inclement weather notwithstanding, people waited outside cooperative sales outlet in Coimbatore on Sunday to buy toor dhal at Rs. 110 a kg.

Cooperative stores across the district sold as much as 2,785 kg toor dhal on the first day of sales on Sunday. The State Government had announced the sale of the pulses at Rs. 110 a kg to bring down the price, which in the open marked had crossed Rs. 200 a kg.

According to sources in the Cooperatives Department, the government had sent 5,000 kg to the district which the Coimbatore District Cooperative Wholesale Store (Chinthamani) had divided among 10 cooperative stores at 500 kg a store.

Starting Sunday morning, there was a steady stream of customers who braved the rain to lay their hands on the subsidised toor dhal.

R. Krishnamoorthy of Indira Nagar, Selvapuram, went to the shop to buy two kg dhal to meet his family's needs. The family's monthly requirement was three kg. By buying dhal at Rs. 110 a kg, he hoped to save Rs. 80 – Rs. 90 a kg and Rs. 240 – Rs. 270 a month. With five mouths to feed and he being the bread winner, the money mattered a lot to him, he said.

Home maker R. Madhu of G.P. Theatre lane was also at the cooperative store, hoping to buy two kg of dhal. She said the money saved could help meet milk or vegetable expenses for the month.

Study on butterflies released

Butterflies sighted during a survey carried out in Coimbatore Forest Division.

A study on butterflies in Coimbatore Forests Division was released here on Wednesday.

The study was conducted by Prabhakar Veerarajendran of Osai, a non-governmental organisation involved in nature and wildlife conservation, and the Coimbatore Division of the Forest Division. to carry out a survey of butterfly species present in Coimbatore Forest Division.

The aim of the study is to record the species of butterflies found in the forests, to record the presence of rare species, and identify the butterfly hotspots, said K. Kalidasan, president of Osai.

The survey report was released by Field Director of Mudumalai Tiger Reserve Srinivas R. Reddy.The first copy was received by Coimbatore District Forest Officer M. Senthilkumar.

A dedicated long term field work was required to understand the butterflies of a particular patch of forest area, said Mr. Veerarajendran. Butterflies are found in abundance during the beginning of monsoon.

The survey found that their number gradually increased from September and reached its peak between October and December. November recorded the maximum butterfly count in Coimbatore Forest Division.

A total of 193 butterfly species were recorded till date, which included 38 skippers, 14 swallotails, 22 whites and yellows, 52 blues, and 67 brush footed.

Thirteen endangered species -- southern bird wing, Tamil spotted flat, Tamil catseye, Madras ace, bicolor ace, many tailed oakblue, Nilgiri tiger, southern blue oak-leaf, malabar rose, Malabar banded swallowtail, Malabar tree nymph, Malabar raven, and white disc hedge blue – were sighted in the division.

Nilgiri tit, and endangered species was found in good numbers. Of the about 330 butterfly species peculiar to Tamil Nadu, 193 were sighted. About 30 more were likely to be sighted, he said.

Rain ushers in cool clime

Chennimalai in Erode receives the highest rainfall of 122 mm

Heavy rainfall for about an hour on Sunday morning rendered low-lying roads inundated, and slowed down vehicular traffic in Erode.

Heavy rain lashed parts of Erode district intermittently throughout Sunday, bringing down the temperature substantially.

Sunshine could be witnessed only for a brief duration in the afternoon hours. Chennimalai received the highest rainfall of 122 mm during the last 24 hours ending 8 am.

Rainfall in other places were(in mm): Kodumudi - 1.4, Erode - 40, Gobi - 19.2, Bhavani - 28.4, Perundurai - 57, Nambiyur - 13.5, Anthiyur - 5, Sathy - 10.8, Kavindapadi - 15, Modakurichi - 24, Ammapettai - 9.6, Bhavani Sagar - 7.2, Kodiveri - 15, and Gunderipallam - 17.2 mm.

Front portion of a wall in Anna Nagar locality of Rangasamudram near Sathy reportedly gave away due to the impact of the rain. There was no injury to any.

Staff Reporter in Salem adds

The delay in re-laying the roads dug for various works has been posing a great hardship for motorists and pedestrians, as the recent rains have turned the roads slushy and unmotorable.

Roads were dug for under ground drainage works, Mettur – Salem Dedicated Water Supply Scheme, Tangedco and by private companies for laying underground cables in the city.

Most of the roads were not re-laid and potholes stare at face. The city witnessed downpour in the last one week and the absence of proper drainage facility has resulted in water logging.

In many residential areas, the roads are so bad that the residents were forced to park their cars on main road.

Residents wanted the authorities to take steps on a war-footing and fill the roads with gravel as a temporary measure to face the rainy season.

The delay in relaying the roads dug for various works pose a great hardship for motorists and pedestrians in Salem

Construction of fishing harbour gains momentum

Construction of a new harbour at Keechnkuppam near here has been gaining momentum. The Fisheries Department has been executing the project at an estimate of Rs. 45 crore under the World Bank-funded Emergency Tsunami Rehabilitation Package (ETRP).

The major infrastructure at this harbour, among other things, included state-of-the-art sheds for mending the fishing nets, washing the fish-crates, generator room and other essential services. Road, street lights facilitating access to the harbour would be provided in course of time, the official said. The harbour is considered a gift to the fishermen of Nagapattinam as they will soon have improvised facilities for anchoring their boats. Presently, they

have been using a piece of land which is not only small and old harbour but also belongs to the Maritime Board. “The landing and anchoring of boats has been a tough task for the fishermen,” say official sources. The harbour, on the backwaters of the Kaduvaiaru, runs to a cumulative length of 750 metres -- 250 metres on the north and 500 metres on the south.

Work on construction of harbour on the northern part had been completed and, in fact, boats are being anchored at this yard, dredging on the southern side has been in progress, according to sources. As many as 750 boats can be anchored at this harbour.

A cross section of Nagapattinam fishermen point out that the harbour would facilitate not only easy landing but also proper maintenance of the boats.

Nutrition, effective cash transfers: How to ensure social protection

Small and marginal farmers comprise 85% of the land holdings in India. Social protection is a survival tool for the rural poor, who have no easy access to wage labour. India recognised the need for social protection early on and introduced a slew of social protection programmes like the National Rural Livelihoods Mission. The Mahatma Gandhi National Rural Employment Guarantee Act (MGNREGA) provides 100 days of assured labour wages to every rural poor household. The minimum support price serves as a social protection instrument for farmers. But are these schemes reaching their target audience?

That’s where the UN’s World Food Programme (WFP) is currently assisting the government on plugging leaks in the Targeted Public Distribution System (TPDS). “Biometric identification of beneficiaries in Kerala and

Odisha has already eliminated families who should not fall under the programme. This alone could yield savings running into millions of dollars," says Hameed Nuru, the WFP's country director. Under the mid-day meal scheme, the WFP is also assisting Odisha in overcoming the nutrition deficit through iron fortification of rice.

The International Fund for Agricultural Development (IFAD), which is working among the rural poor with the Madhya Pradesh government, finds that addressing hunger nutrition is often overlooked. It feels that communities should be made aware of the nutritive value of food available in their natural habitat. "Promoting nutrition-sensitive agriculture through revival of highly nutritive traditional crops such as kodo kutki and other millets can be a good strategy," says Meera Mishra, country coordinator, IFAD.

Growing local and procuring local eliminate the need to transport food and its carbon footprint. In this context the Madhya Pradesh government's Samagra database and model of cash transfers deserve special mention. The model is now being used by almost all the departments of the state for various programmes, including a pilot on cash transfers for the PDS to implement the National Food Security Act. Coupled with good governance, cash transfers can eliminate pilferage, which eats into benefits meant for the poor.

The UN Food and Agriculture Organisation's (FAO's) work shows that besides plugging leakages, cash transfers have a multiplier effect on farm outputs and initiating microenterprises. In Latin America and sub-Saharan Africa, cash transfers have improved access to health, education services and reduced child labour. Social protection is particularly helpful for households

as women take charge of food and nutrition, children's education and wellbeing.

"Programmes like the MGNREGA can transform India's rural economy through creation of public and private goods such as terracing, irrigation and other infrastructures, besides injecting income into the local economy," says Shyam Khadka, the FAO's India representative. Brazil's Bolsa Familia programme is a shining example of how about 50 million people are assisted. Since its introduction 12 years ago, 36 million Brazilians were lifted out of poverty. For every Brazilian Real spent, the economy at large gains an estimated 1.87 Brazilian Reals. Brazil has shown how rather than just giving handouts, social protection should focus on sustainable pathways out of poverty and food insecurity.

Ashim Choudhury is communications consultant, Food and Agriculture Organization The views expressed are personal

India to emerge as largest cotton producer in the world

With domestic trade estimating cotton production at around 400 lakh bales, India is expected to emerge as the largest cotton producer in the world in 2015-16.

Cotton output in all major producing countries in the year, barring India, has been anticipated to be lower than the previous season.

As a result, China has had to vacate its place as the largest producer of cotton to India, according to sources in Southern India Mills' Association (SIMA), the apex body of spinners in the Southern Region.

Quoting reports of United States Department of Agriculture (USDA), the sources said global cotton production during 2015-16 has been estimated at 23.68 million tonnes, 8.6% lower than previous season production of 25.90 million tonnes.

Cotton production in China and the US has been estimated to be lower by 13.3% and 17.7%, respectively, than that in the previous production.

Though USDA anticipated a marginal reduction in India's production, trade estimates suggested that the production would be around 400 lakh bales of 170 kg each, taking India to the first position, the sources said.

USDA report on India has estimated cotton area in the country in 2015-16 (August to July) at 11.26 million hectares and cotton production at 370 lakh bales.

It anticipated yield to come down to 524 kg per hectare, lower than previous yield of 527 kg, because of deficient rains in the later half of the monsoon

season and instances of pest presence in Gujarat and Punjab, the sources said.

Farmers in MP hit by falling prices of Basmati paddy

For the second year in a row, basmati rice farmers in Madhya Pradesh will bear the brunt of falling prices of the product, once hailed as a prominent reason for making agriculture more remunerative.

The farm sector in MP has been under tremendous strain as other kharif crops namely soybean, urad and moong have also witnessed a drop in production.

At the commencement of the procurement season, basmati paddy is bought at Rs 1500 per quintal, down from the opening rate of Rs 2200 per quintal in 2014 and Rs 3600 per quintal in 2013.

Procurement companies blame international factors for the drop in prices. Interestingly, prices of basmati rice have not reduced at all in the last year even though prices of paddy, from which rice is removed, have crashed to almost a third of what they were in 2013.

“Prices of basmati, an export-oriented product, depend on international factors. Policies of other countries, too, play a role in determining price of basmati in India,” said Rajender Wadhwan, director, LT Foods.

Prices however may regain a bit after Diwali as procurement begins at earnest by big companies.

Procurement prices show a downward trend even though there has been a substantial reduction in the area of paddy cultivation in MP between 2014 and 2015.

As per agriculture department statistics, area under cultivation of paddy stood at 21.53 lakh hectares in 2014, which declined by 10.72% to 19.22 lakh hectares in 2015.

Of this, on an estimate, about 2 lakh hectares is under basmati cultivation. Basmati paddy production is estimated to be about 10 lakh tones, of which about 70% is exported.

MP is also locked in a legal battle with APEDA for securing GI tag for basmati from the state.

“The cost of inputs in basmati crop remains high which has reduced its profitability. There has not been any rainfall since August and the government failed to ensure availability of power for tube wells either. This would be the main factor in decline in production,” said Alamgir Saulat, a paddy cultivator in Raisen.

THE TIMES OF INDIA

Agro-forestry: Farmers feel pinch of falling prices

Agro-forestry, a practice that had been taken up by many farmers in northern India with much enthusiasm and gusto under the guidance of the Dehradun-based Forest Research Institute, has left many cultivators disillusioned. Under agro-forestry, farmers took to growing trees like eucalyptus and poplar on the fringes of their fields expecting rich returns from the timber.

However, this did not happen. The prime reason is that industries, which once depended on these trees for making paper have switched to cheaper alternatives. With the demand dipping, the prices of these once-profitable trees have fallen. In the absence of minimum support price and stable markets, the farmers now feel cheated after planting these trees which take six to eight years to mature.

HS Ginwal, scientist with FRI, said, "Agro-forestry combines agricultural and forestry techniques with trees being grown around plots where crop are cultivated. This is more diverse, profitable and sustainable land use system. The farmers in Punjab, Haryana and those in Udham Singh Nagar in Uttarakhand have taken up the plantation of eucalyptus and poplar species in their agriculture fields in big way to provide wood for making paper, match sticks, perfumes and plywood for furniture to the industries etc."

He said since 1980s, FRI has been providing farmers hybrid clone and improved species of these trees after years of research work. It takes a eucalyptus tree around eight years and a poplar six years to mature to be harvested.

"Many large companies such as ITC, WIMCO, etc have begun their own research and development wings, where they provide good hybrid clones and varieties to farmers directly at subsidized costs, whereby farmers give the same trees back to them on maturity at a good price," he said. Ashok Kumar, a farmer from Hoshiarpur, Punjab, said, "As the prices of both eucalyptus and poplar reached to its peak at around Rs 1100-1300 a tonne in 2011-12, farmers took up their plantations in big way. But in the last two years, the prices have fallen to just Rs 450 a tonne. The farmers have no option but to cut the poplar tree which after a period of six years become hollow. They can wait for a year or two for the eucalyptus but not more than that."

According to HP Singh, forestry economist with FRI, owing to lack of minimum support price and storage facility, an unstable market, cheaper options such as sugarcane's baggase or bamboo available for paper making and the fluctuation of market due to imbalance between demand and supply, farmers have not been able to derive profits from agro-forestry. The state governments need to support farmers in such dismal scenario and help them provide the demand of the wood and tree cover outside the reserve forest of the country"

THE HINDU BusinessLine

Big correction in coriander

News of the regulator seeking information on the contract spooked buyers

Coriander prices have tanked over 20 per cent in the last two weeks on the National Commodity and Derivatives Exchange (NCDEX). They are currently trading at Rs. 9,391 per quintal. This sharp and sudden fall took the markets by surprise.

The trigger for the huge fall came after unconfirmed reports stating that the Securities and Exchange Board of India (SEBI) has asked the NCDEX to

provide historical price data of the commodity. This made the market nervous and the contract witnessed panic selling thereafter.

The ripple effect had the contract hitting the lower circuit for three consecutive days. Following this, the NCDEX has increased the margin for the coriander futures contract with effect from Thursday last week.

The exchange has levied a 5 per cent special cash margin over and above the existing margin of 5 per cent on the short side. The exchange has also clarified that the regulator seeking information was part of a normal process. If fears of regulatory action dissipate, the contract could reverse its recent downtrend.

The fall in the last two weeks has wiped out all the gains made in the contract between August and early October. It has also turned the outlook bearish for the contract.

Medium-term view

The outlook for the coriander contract is bearish. It was in a strong uptrend since late February. The price had more than doubled from Rs. 6,182 in February to its all-time high of Rs. 13,444 in the first week of June. The corrective fall from this high found support at the psychological Rs. 10,000 level in August. But the bounce-back thereafter failed to get strong follow-through buying and the contract reversed lower after recording a high of Rs. 12,230 in the second week of October.

This second leg of downmove has decisively broken below support at Rs. 10,000. As a result, the uptrend that was in place since March has been reversed.

Immediate supports for the contract are at Rs. 9,200, a trendline level, and then at Rs. 8,871 — the 61.8 per cent Fibonacci retracement level. A strong break below Rs. 8,871 can drag the contract lower to Rs. 8,450 or even Rs. 8,300 in the medium term. The key resistance to watch is the Rs. 11,500- Rs. 12,000 zone. Only a strong break above this will ease the downside pressure and bring back positive sentiment for the contract. It will then increase the chances of revisiting the previous highs.

The sharp fall in the last two weeks may mark the beginning of a short-term downmove.

The presence of a key trendline support at Rs. 9,200 could pause this fall in the near term. While the contract trades above Rs. 9,200, there is a possibility of a corrective bounce to test the key resistances at Rs.10,000 and Rs. 10,200.

The contract could come under fresh selling pressure as the price rallies to test this resistance zone. The upside for the contract is expected to be capped at Rs. 10,200. A reversal from here will increase the danger of the contract breaking below Rs. 9,200 in the coming days. A decisive daily close below Rs. 9,200 will increase pressure on prices and drag the contract lower to Rs. 9,000 and Rs. 8,900 thereafter in the short term.

The downward pressure will ease only on a strong break and a decisive close above the 200-day moving average resistance. Such a break will increase the chances of a rally to Rs. 10,700 and Rs. 11,000 thereafter.

NCDEX-CORIANDER
Supports
Rs. 9,200, Rs. 8,871
Resistances
Rs. 10,200, Rs. 10,700

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nature

Low-fat diets have low impact

Nutritionists recommend a Mediterranean diet, rich in fruits and vegetables.

An analysis of 53 weight-loss studies that included more than 68,000 people has concluded that, despite their popularity, low-fat diets are no more effective than higher-fat diets for long-term weight loss.

And overall, neither type of diet works particularly well. A year after their diets started, participants in the 53 studies were, on average, only about 5 kilograms (11 pounds) lighter.

“That’s not that impressive,” says Kevin Hall, a physiologist at the US National Institute of Diabetes and Digestive and Kidney Diseases in Bethesda, Maryland. “All of these prescriptions for dieting seem to be relatively ineffective in the long term.”

The study, published in *The Lancet Diabetes and Endocrinology*[1], runs counter to decades' worth of medical advice and adds to a growing consensus that the widespread push for low-fat diets was misguided. *Nature* looks at why low-fat diets were so popular and what diet doctors might prescribe next.

Are the new findings a surprise?

The advantages of low-fat diets have long been in question. “For decades we’ve been touting low-fat diets as the way to lose weight, but obesity has gone up,” says Deirdre Tobias, lead author of the study and an

epidemiologist at Brigham and Women's Hospital in Boston, Massachusetts. "It seemed evident that low-fat diets may not be the way to go."

Some clinical data have backed up this observation. But Tobias's research is unique in both its size and its scope: the study focused only on long-term results of diets, and it also took into account how stringent the diets were, says Hall, who was not involved in the work.

The results yielded no statistically meaningful difference between low-fat diets and higher-fat diets overall. And although there was a slight benefit to higher-fat diets that were also low in carbohydrates, Hall says that this difference — which is about 1 kilogram — is clinically meaningless.

But the shops are still full of foods advertising that they are low in fat. Hasn't anyone got the message?

Processed foods, cooking shows and even some clinicians continue to push low-fat foods for weight loss. But Tobias hopes that this is starting to change.

In the United States, an important revision may come later this year when the US Department of Agriculture is scheduled to release its update to the nation's dietary guidelines, which set the tone for everything from medical advice to school lunches. Earlier this year, a scientific report to the agency recommended the eradication of limits on daily fat consumption.

Why did fat get the blame in the first place?

No matter what the diet, the key to weight loss is to burn more calories than are taken in. Fats contain more than twice as many calories per gram as proteins or carbohydrates. It seemed logical, then, to reduce fat as a means of reducing calories overall, says Hall.

No one knows for sure why this strategy failed, says Tobias. But often those fats were replaced by carbohydrates, which can leave dieters feeling less sated and more prone to snacking.

So is fat back on the menu?

As far as weight loss is concerned, the study suggests that there is no need to limit healthy fats (such as the unsaturated fats in olives, avocados and fatty fish). But it did not address other health concerns, and saturated fats are still thought to be associated with poor heart health, including heart attacks and stroke.

Why did all of the diets perform so poorly over the long term?

Dieters tend to adhere strictly to their diet in the beginning, but quickly begin to revert to old habits, says Hall. By about six months, dieters have often reached their lowest weight but are back to consuming nearly as many calories as they did before they started dieting. From there, they start putting the weight back on.

Studies that look at physiological indicators of calorie intake have shown that this overall eating pattern holds, even when dieters report that they are still cutting calories[2].

Does this mean that dieting doesn't help when it comes to losing weight?
Not necessarily. The data reported in these studies are averages. Some of those enrolled in the studies probably did keep off a significant amount of weight for over a year; others may have gained weight. “There are some people who can lose weight and keep it off on a low-carb or low-fat diet,” Hall says. “We don’t know ahead of time who will do better.”

Nutritionists are beginning to shift their focus away from single nutrients and towards looking at the overall pattern of eating. The ‘Mediterranean diet’, for example, advocates a menu replete with fruits and vegetables.

It is a more complex public health message — and more difficult to study in clinical trials — but Tobias thinks that ultimately, diets will be personalized. “To say cynically that there’s no diet that’s effective — I don’t think that’s the whole story.”